signals representing the colour densities of the measured measuring fields at least for the colours red, blue and green.

II. REMARKS

a) Applicants' Amendments

Reconsideration of the above-identified application in view of the foregoing claim amendments, and the following remarks is respectfully requested. After entry of the above-noted amendments, claims 1 and 3-7 and 9-30 are pending in this application. Independent claim 1 has been amended to cancel subject matter previously added by amendment (see Amendment and Response filed August 27, 2002) and to include the subject matter of dependent claim 8, as well as additional subject matter set forth in the specification, as filed (see, e.g., page 10, lines 27-31). Consistent with the amendment to independent claim 1, dependent claim 8 has been canceled, without prejudice. In addition, new independent claim 29 has been added to the application. Support for the new independent claim 29 is found throughout the specification, as originally filed (see, e.g., original claims 1, 8 and the specification at page 10, lines 27-31). New dependent claim 30 has been added, which corresponds to original dependent claim 2 (previously canceled without prejudice). Independent claim 25 has also been amended, support for which is found throughout the specification (see, e.g., page 10, lines 22-31.) Applicants respectfully submit that no new matter has been added by way of the proposed claim amendments, and entry thereof is respectfully requested.

b) Response To The Art Rejections

In the outstanding Office Action (final rejection), claim 1 was rejected under 35 U.S.C. §102(b) based on U.S. Patent No. 5,519,210 to Berner (the "Berner '210 patent").[1] The remaining claims were rejected under 35 U.S.C. § 103(a) based on the Berner '210 patent, either alone or in combination with U.S. Patent No. 6,338,030 to Senn (the "Senn '030 patent"), U.S. Patent No. 5,118,183 to Cargill (the "Cargill '183 patent), U.S. Patent No. 6,151,422 to Hayduchok et al. (the "Hayduchok '422 patent"), U.S. Patent No. 5,929,413 to Gardner (the "Gardner '413 patent"), U.S. Patent No. 5,402,361 to Peterson et al. (the "Peterson '361 patent"),

[1] The outstanding Office Action also rejects claim 2 under 35 U.S.C. §102(b); however, claim 2 was canceled in the Amendment and Response dated August 27, 2002.

U.S. Patent No. 6,301,104 to Hu (the "Hu '104 patent), or a combination thereof. The grounds for rejection are substantially unchanged relative to the initial Office Action dated March 13, 2002. Applicants respectfully traverse the various rejections, in view of the above-noted amendments and the remarks which follow.

With reference to the applicants' pending device claims, applicants have amended independent claim 1 and added new independent claim 29 to more particularly point out and distinctly claim advantageous aspects of applicants' disclosed device. Applicants device is designed for photoelectric measurement of measurement fields contained on an original, and includes:

- a housing;
- a transport structure;
- a detector of a photoelectric measurement arrangement; and
- a controller.

The functionalities of applicants' recited controller provide significant benefits and advantages to users of applicants' claimed device. The recited controller controls movement of the original through the device housing, converts electrical signals into digital measurement data, and supplies the digital measurement data to an interface for ancillary processing. Moreover, the controller of applicants' claimed device advantageously determines whether the front or rear edge of the original has been inserted into the device housing. This determination makes it possible for applicants' claimed device to perform accurate and reliable photoelectric measurements, notwithstanding user error in inserting the rear edge of the original into the device. Additionally, the controller accesses stored configuration data for a variety of originals, and controls measurements of individual measuring fields on originals based on determinations from digital measuring data of pre-defined color fields and a consequent selection/utilization of appropriate configuration data.

Thus, applicants' amended claim 1 recites, *inter alia*:

> wherein configuration data representing the arrangement of the measuring fields on the original for a plurality of different types of originals is stored in the controller; said controller being designed for determining from generated digital measuring data of pre-defined code fields an original identification code specific for the type of original and defined by colours of the pre-defined code fields, for

selecting stored configuration data based on the determined original identification code for the type of original that contains said identification code, and for controlling the measurement of individual measuring fields on the original based on the selected configuration data, and

wherein the controller determines whether the front edge or the rear edge of the original first enters the insertion opening of the housing.

Similarly, new independent claim 29 recites, *inter alia*:

wherein configuration data is accessible by the controller, said configuration data permitting the controller to determine the type of original based on the arrangement of measuring fields on the original,

wherein the controller determines an identification code from generated digital measuring data of a pre-defined code field on the original, selects configuration data based on the said identification code, and controls measurement of individual measuring fields on the original based on the selected configuration data, and

wherein the controller determines whether the front edge or the rear edge of the original first enters the insertion opening of the housing.

Applicants respectfully submit that the currently claimed devices of independent claims 1 and 29 patentably distinguish over the references relied upon in the outstanding Office Action, whether taken alone or in combination.

Turning to the specific outstanding art rejections, in view of applicants' amendment of claim 1 to include, *inter alia*, the subject matter of original dependent claim 8, applicants respectfully submit that the outstanding art rejections of claims 1-7 and 9-24 are rendered moot. Accordingly, applicants direct their arguments to the outstanding rejection of claim 8 under 35 U.S.C. § 103(a) based on the teachings of the Berner '210 patent, in view of the Cargill '183 patent. The Cargill '183 patent was relied upon for its teachings with respect to inclusion of a white reference patch (claim 7), automatic storage of different types of test strips (claims 8, 9, 25 and 28), and a bar code scheme on a test strip (claims 11 and 27). For the reasons discussed herein, applicants respectfully submit that independent claim 1, as amended, patentably distinguishes over the Berner '210 and Cargill '183 patents.

The Berner '210 and Cargill '183 patents fail to teach or suggest a device for photoelectric measurement that includes, *inter alia*, a controller that determines whether the front or rear edge of the original was inserted into the device housing. Indeed, applicants respectfully submit that the cited references, whether taken alone or in combination, are devoid of any teaching or suggestion that a controller may be advantageously employed to determine whether the original has been inserted with its front or rear edge. Such advantageous functionality is unique to applicants' claimed device and, for at least this reason, applicants respectfully submit that claims 1, 3-7, 9-24 and 29-30 patentably distinguish over the art of record and are in condition for allowance.

Moreover, applicants respectfully submit that the further functionality embodied in applicants' claimed controller, i.e., functionality that permits accessing of stored configuration data for a variety of originals, and measurements control of individual measuring fields on originals based on determinations from digital measuring data of pre-defined color fields and a consequent selection/utilization of appropriate configuration data , further distinguishes applicants' claimed device from the art of record. "Automatic storage of different types of test strips," as purportedly disclosed in the Cargill '183 patent, simply fails to teach or suggest the advantageous functionalities associated with applicants' recited controller, as expressly set forth in applicants' independent claims 1 and 29. For this additional reason, applicants respectfully submit that all of applicants' device claims, including specifically independent claims 1 and 29 and the dependent claims that depend directly or indirectly from claim 1, are patentable over the art of record.

Turning to the applicants' pending "test original" claims, applicants have amended independent claim 25 to further recite that the test original includes "a code for differentiating a front edge from a rear edge of said test original." Applicants' claimed test originals provide significantly improved functionality in the color management field. The claimed test originals include a machine-readable code that contains information about the type of original, i.e., characteristics of the original to be measured, and the production unit in which the original is used. Moreover, the claimed test original includes code information for differentiating the front/rear edges of the original. Thus, the claimed test original supports enhanced, automated color management. Indeed, applicants' claimed test originals simplify the handling of test originals and reduce the potential for data entry errors associated with test procedures.

Applicants respectfully submit that the prior art relied upon in the outstanding Office Action fails to teach or suggest a test strip that includes a plurality of measuring fields "containing information about the type of original and information about the production unit in which the original is used," and "a code for differentiating a front edge from a rear edge of said test original." Accordingly, applicants respectfully request reconsideration and prompt allowance of the pending "test strip" claims, i.e., claims 25-28.

Contrary to the position advanced in the outstanding Office Action, applicants' prior arguments were advanced to show that the rejections of applicants' "test strip" claims are untenable under Section 103. The fact that the Cargill '183 patent discloses "codification" of some information does not render obvious all forms of "codification," regardless of the benefits and/or advantages associated therewith. Applicants respectfully submit that the art of record fails to render obvious applicants' claimed test strips, which include specific and advantageous codifications which are neither taught nor suggested in the prior art. Applicants respectfully submit that the current obviousness rejections directed to applicants' "test strip" claims are without foundation, and should be withdrawn.

For the foregoing reasons, applicants respectfully submit that all claims are now in condition for allowance. Prompt action leading to an early Notice to that effect is earnestly solicited. If the Examiner believes that a telephonic interview may facilitate resolution of any matter, applicants' representative may be contacted at the number indicated below.

Respectfully submitted,
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Signature
12/23/02
Date of Signature

VERSION WITH MARKINGS SHOWING CHANGES MADE

In the Claims

Amend independent claim 1 to read as follows:

1 (Thrice amended). A device for the automatic photoelectric measurement of measuring fields contained on an original, the device comprising:

a housing having an insertion opening for insertion of the original, said original having a front edge and a rear edge;

a transport structure for automatically pulling the original into the housing and for transporting the original along a transport path;

a detector of a photoelectric measurement arrangement for providing light of a defined quality to measuring fields contained on the original, for receiving measurement light being remitted or transmitted from the measuring fields pending on the original, and for converting the measurement light into electrical signals representing the colour characteristics of the measuring fields, said photoelectric measurement arrangement being a spectral measurement arrangement, for generating electrical signals representing the spectra of the measured measuring fields on the original; and

a controller for cooperating with the transport ~~members~~ structure and the spectral measurement arrangement for controlling the pulling in and transport of the original, for converting the electrical signals generated by the spectral measurement arrangement into digital measuring data, and for supplying said digital measuring data to an interface for access by an external computer and further processing; ~~and~~

~~an additional densitometric measurement arrangement, cooperating with said controller for generating electrical signals representing the colour densities of the measured measuring fields at least for the colours red, blue and green~~

wherein configuration data representing the arrangement of the measuring fields on the original for a plurality of different types of originals is stored in the controller; said controller being designed for determining from generated digital measuring data of pre-defined code fields an original identification code specific for the type of original and defined by colours of the pre-defined code fields, for selecting stored configuration data based on the determined original identification code for the type of original that contains said identification code, and for controlling the measurement of individual measuring fields on the original based on the selected configuration data, and

wherein the controller determines whether the front edge or the rear edge of the original first enters the insertion opening of the housing.

Cancel dependent claim 8, without prejudice.

Amend independent claim 24 to read as follows:

25 (Twice amended). A test original for testing the settings of a photographic production unit, the test original comprising:

a plurality of measuring fields in dependence upon a respective use, wherein the plurality of measuring fields includes a machine-readable code, said code containing information about the type of the original and information about the production unit in which the original is used; and

a code for differentiating a front edge from a rear edge of said test original.

Add the following new independent claim 29:

29 (New). A device for photoelectric measurement of measuring fields, the device comprising:

a housing having an insertion opening for insertion of an original, said original having a front edge, a rear edge and containing measuring fields;

a transport structure for transporting the original along a transport path within the housing;

a detector of a photoelectric measurement arrangement for providing light of a defined quality to the measuring fields on the original, for receiving measurement light being remitted or transmitted from the measuring fields on the original, and for converting the measurement light into electrical signals representing the colour characteristics of the measuring fields; and

a controller for cooperating with the transport structure and the spectral measurement arrangement for controlling transport of the original, for converting the electrical signals generated by the photoelectric measurement arrangement into digital measuring data, and for supplying said digital measuring data to an interface for access by a processor;

wherein configuration data is accessible by the controller, said configuration data permitting the controller to determine the type of original based on the arrangement of measuring fields on the original,

wherein the controller determines an identification code from generated digital measuring data of a pre-defined code field on the original, selects configuration data based on the said identification code, and controls measurement of individual measuring fields on the original based on the selected configuration data, and

wherein the controller determines whether the front edge or the rear edge of the original first enters the insertion opening of the housing.

Add the following new dependent claim 30:

30 (New). The device as defined in claim 1, further including an additional densitometric measurement arrangement, cooperating with the controller for generating electrical signals representing the colour densities of the measured measuring fields at least for the colours red, blue and green.

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